

**CHICAGO POWER  
ELECTRIC® SYSTEMS**

# BATTERY CHARGER WITH LCD DISPLAY

**Model 65834**

## SET UP AND OPERATING INSTRUCTIONS



Distributed exclusively by Harbor Freight Tools®.

3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our website at: <http://www.harborfreight.com>



**Read this material before using this product.  
Failure to do so can result in serious injury.  
SAVE THIS MANUAL.**

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**For technical questions or replacement parts, please call 1-800-444-3353.**

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## SAVE THIS MANUAL

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Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

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## IMPORTANT SAFETY INFORMATION

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In this manual, on the labeling, and all other information provided with this product:



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

### **DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.

### **WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.

### **CAUTION**

**CAUTION**, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

### **NOTICE**

**NOTICE** is used to address practices not related to personal injury.

### **CAUTION**

**CAUTION**, without the safety alert symbol, is used to address practices not related to personal injury.

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### General Safety Warnings:



**WARNING** Read all safety warnings and instructions. *Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. Save all warnings and instructions for future reference.*

1. **Work area safety**
  - a. **Keep work area clean and well lit.** *Cluttered or dark areas invite accidents.*
  - b. **Do not operate this product in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** *This product can create sparks which may ignite the dust or fumes.*
  - c. **Keep children and bystanders away while operating this product.** *Distractions can cause you to lose control.*
2. **Electrical safety**
  - a. **The Power Cord Plug must match the outlet. Never modify the Plug in any way.** *Unmodified plugs and matching outlets will reduce risk of electric shock.*
  - b. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges and refrigerators.** *There is*

*an increased risk of electric shock if your body is grounded.*

- c. **Do not expose this product to rain or wet conditions.** *Water entering this product will increase the risk of electric shock.*
  - d. **Do not abuse the Power Cord.** **Never use the Cord for carrying, pulling or unplugging this product.** **Keep the Cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*
  - e. **This product for use indoors only.**
  - f. **If operating this product in a damp location is unavoidable, use a Ground Fault Circuit Interrupter (GFCI) protected supply.** *Use of a GFCI reduces the risk of electric shock.*
- 3. Personal safety**
- a. **Stay alert, watch what you are doing and use common sense when using this product. Do not use this product while you are tired or under the influence of drugs, alcohol or medication.** *A moment of inattention while operating this product may result in serious personal injury.*
  - b. **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*
- 4. Product use and care**
- a. **Do not force this product. Use the correct product for your application.** *The correct product will do the job better and safer at the rate for which it was designed.*
  - b. **Disconnect this product from its power source before making any**

**adjustments, changing accessories, or storing the product.**

- c. **Store this product out of the reach of children and do not allow persons unfamiliar with this product or these instructions to operate the unit.** *Electrically powered products are dangerous in the hands of untrained users.*
  - d. **Maintain this product. Check for breakage of parts and any other condition that may affect this product's operation. If damaged, have the unit repaired before use.** *Many accidents are caused by poorly maintained products.*
  - e. **Use this product and its accessories in accordance with these instructions, taking into account the working conditions and the work to be performed.** *Use of this product for operations different from those intended could result in a hazardous situation.*
- 5. Service**
- a. **Have your Battery Charger serviced by a qualified repair person using only identical replacement parts.** *This will ensure that the safety of the product is maintained.*

### **Specific Safety Warnings:**

- 1. Maintain labels and nameplates on the Battery Charger. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
- 2. Wear ANSI-approved safety goggles during set up and use of the Battery Charger.

3. Do not start a vehicle or turn on a mobile unit when connected to the Battery Charger.
4. When the battery is being charged in the vehicle, verify that the ignition is off. Connect the positive (RED with +) Cable Clamp to the positive (+ or P) terminal of the battery. Connect the negative (BLACK with --) to an unpainted, solid metal portion of the vehicle. Do not connect to the carburetor or fuel lines.
5. Charge in a well ventilated area. Explosive gases may be produced during charging. Do not smoke, cause sparks, or strike matches near the battery when charging.
6. Always refer to the user manual of the battery for charging instructions and precautions prior to using the Battery Charger.
7. Avoid unintentional starting. Prepare to begin work before turning on the unit.
8. Do not leave the Battery Charger unattended when it is plugged into an electrical outlet. Unplug the Power Cord from its power source before leaving.
9. Do not reverse the polarity of the Cable Clamps or vehicle battery.
10. This product is not a toy. Keep it out of reach of children.
11. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure. In addition, people with pacemakers should:
  - Avoid operating alone.
  - Do not use with power switch locked on.
  - Properly maintain and inspect to avoid electrical shock.
  - Any power cord must be properly grounded. Ground Fault Circuit Interrupter (GFCI) should also be implemented – it prevents sustained electrical shock.
12. **WARNING:** Handling the Power Cord on this product will expose you to lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, et seq.)
13. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



**SAVE THESE INSTRUCTIONS.**

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## GROUNDING

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### **⚠️ WARNING** TO PREVENT ELECTRIC SHOCK



#### AND DEATH FROM INCORRECT GROUNDING WIRE CONNECTION:

Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the Power Cord Plug provided with the Battery Charger. Do not use the Battery Charger if the Power Cord or Plug is damaged. If damaged, have it repaired by a service facility before use. If the Plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

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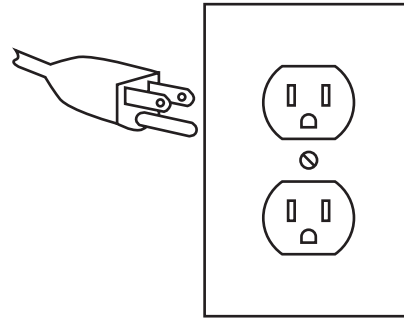
### Grounded Tools. Tools with Three Prong Plugs:

1. Tools marked with “Grounding Required” have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock.  
**(See 3-Prong Plug and Outlet.)**
2. The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool’s grounding system and must never be attached to an electrically

“live” terminal.

**(See 3-Prong Plug and Outlet.)**

3. The tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the preceding illustration.  
**(See 3-Prong Plug and Outlet.)**



3-PRONG PLUG & OUTLET

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## EXTENSION CORDS

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1. Grounded tools require a three wire extension cord.
2. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage.  
**(See Table A.)**
3. The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. **(See Table A.)**
4. When using more than one extension cord to make up the total length, make sure each cord contains at

least the minimum wire size required.  
(See Table A.)

5. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size. (See Table A.)
6. Make sure the extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using.

RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120 VOLT)					
NAMEPLATE AMPERES (at full load)	EXTENSION CORD LENGTH				
	25'	50'	75'	100'	150'
0 – 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	18	14	12	10	-
12.1 – 16.0	14	12	10	-	-
16.1 – 20.0	12	10	-	-	-

**TABLE A** \* Based on limiting the line voltage drop to five volts at 150% of the rated amperes.







## PRODUCT SPECIFICATIONS

Electrical Requirements	120 VAC / 60 Hz Power Cord: 18 AWG x 3C SVT Power Plug: 3-Prong, Non-Polarized Output Voltage: 14.4VDC Maximum Output Current: 6 Amps Maximum
Product Applications	6VDC or 12VDC Lead-Acid Batteries Only. (3Ah to 48Ah Charger Capacity) Indoor Use Only
Features	<b>Three Error Codes Display:</b> “E01” = Wrong Polarity “E02” = Disconnected During Charging “E03” = Damaged Battery or Not a 6V or 12V Battery <b>Battery Status Display:</b> Empty = No Battery/No Connection One Bar = Battery Connected Four Bars = Fully Charged Flashing Bars = Battery Charging <b>4-Stage Charging Symbol Indicates</b> 2 Amp, 4 Amp, 6 Amp, or Auto <b>Push Button Starts Charging</b> Display Shows Charging Voltage
Accessories	Battery Cable Clamps (Qty. 2)

## UNPACKING

When unpacking, check to make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at the number shown on the cover of this manual as soon as possible.

## SYMBOLOLOGY

	Double Insulated
	Canadian Standards Association
	Underwriters Laboratories, Inc.
	Volts Alternating Current
	Amperes
	No Load Revolutions per Minute (RPM)

## OPERATING INSTRUCTIONS



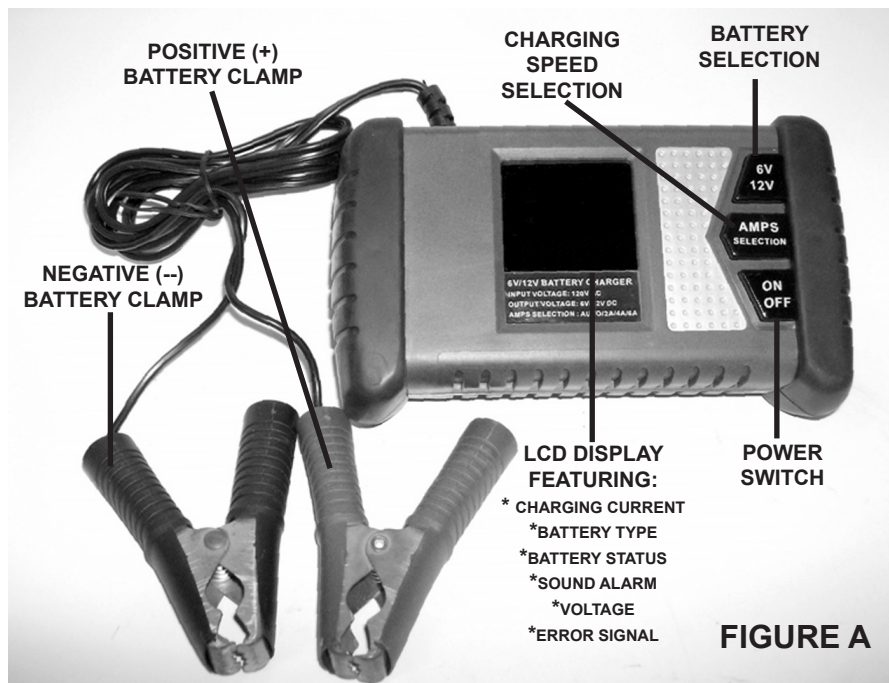
Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual before set up or use of this product.

**WARNING** TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Unplug the Battery Charger from its power source before performing any inspection, maintenance, or cleaning procedures.

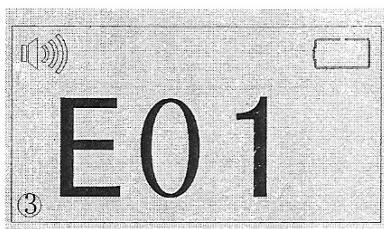
## Display Features:

1. **Power Switch:** Press “ON/OFF” to start charging. Press “ON/OFF” again to stop charging. (See Figure A.)
2. **Charging Rate Selection:** Press “AMPS SELECTION” button to set charging current. (See Figure A.)
3. **LCD Display of Charging Current:** The LCD will indicate charging current (2 Amp, 4 Amp, 6 Amp, or Auto) that has been selected. (See Figure A.)
4. **Battery Selection:** Press “6V or 12V” for the battery type that is to be charged. (See Figure A.)
5. **LCD Display of Battery:** The LCD will indicate the battery type (6V or 12V) that has been selected. (See Figure A.)
6. **LCD Display of Voltage:** Before connecting the battery, the LCD will display “00.0V”. After connecting the battery, the LCD will display the battery voltage. During charging, the LCD will display the charging voltage. (See Figure A.)

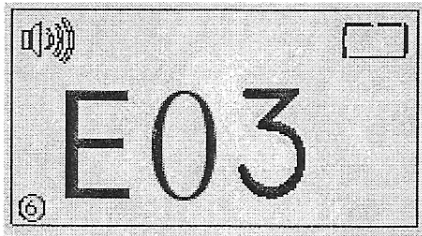


## Error Signals:

1. Under *improper polarity*, the LCD will display “E01”. (See Below.)
2. If battery is *disconnected* during charging, the LCD will display “E02”. (See Below.)

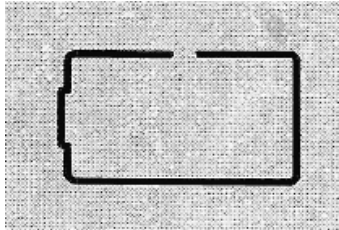


3. If the battery *is not* 6 volt or 12 volt, or the battery is damaged, the LCD will display “E03”. (See Below.)



### Battery Status

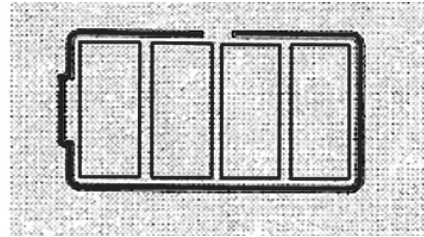
1. If the battery *is not* connected, the LCD will display the following: (See Below.)



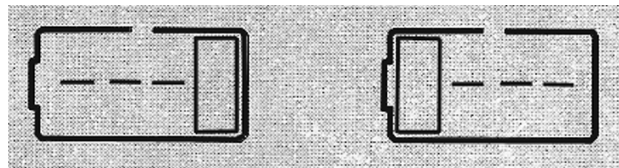
2. If the battery *is* connected, the LCD will display the following: (See Below.)



3. If the battery *is* fully charged, the LCD will display the following: (See next illustration.)



4. If the battery is in the process of *charging*, the LCD will display the following: (See Below.)



### Sound Alarms:

1. A *continuous* “beep” indicates wrong polarity, disconnection during charging, wrong type of battery, dead or improper battery connection.
2. A *short* “beep” occurs each time a button is pressed.
3. A *short* “beep” occurs when connecting or disconnecting the battery.

### The Charging Process:

1. Remove the battery caps from the vehicle’s battery to allow any excess gas to escape and prevent bursting of the battery.
2. Check and top off the battery’s liquid.
3. When the battery being charged is in the vehicle, verify that the ignition is off. Connect the positive (RED with +) Battery Clamp to the



positive (+ or P) terminal of the battery. Connect the negative (BLACK with --) Battery Clamp to an unpainted, solid metal portion of the vehicle. Do not connect to the carburetor or fuel lines.

4. After the Battery Clamps are connected, slightly rotate the Clamps to remove any dirt or oxidation layer to ensure proper contact.
5. Plug the Power Cord of the Battery Charger into the nearest 120 volt, grounded, electrical outlet.
6. To select the charging speed: Press the "AMPS SELECTION" button for maximum charging current. **(See Figure A and Below.)**

Recommended Charging Current			
Charging Current	2 Amp	4 Amp	6 Amp
Battery Capacity	3 ~ 20 Ah	6 ~ 36 Ah	12 ~ 48 Ah

7. To select the battery voltage: Press the "BATTERY SELECTION" button (either 6V or 12V). **(See Figure A.)**
8. To start the charging process: Press the "ON/OFF" Power Switch. There is a short "beep" sound to indicate the charging has started. **(See Figure A.)**

### The Charging Stages:

1. The constant charging stage: Press the "ON/OFF" Power Switch. The Battery Charger will run under the charging current selected until the charging voltage is raised up to 7.2 volts for a 6 volt battery or up to 14.4 volts for a 12 volt battery. The Bat-

tery Charger will then turn to the next charging stage under constant voltage.

If "AUTO" is selected, the Battery Charger starts charging from 2 Amps until the charging voltage is raised up to 7.2V volts for a 6 volt battery (motorcycle) or up to 14.4V volts for a 12 volt battery (automobile). The Battery Charger then turns to the next charging stage (float charging).

2. Constant voltage stage: The Battery Charger outputs a constant charging voltage of 7.2 volts for a 6 volt battery or 14.4 volts for a 12 volt battery. The charging current gradually decreases until it is less than 1 Amp and turns to the next floating charging stage.
3. Floating charging stage: The battery is fully charged and ready to use. The LCD Display shows the battery signal which indicates the battery is fully charged. The Battery Charger outputs a constant safe voltage of 6.8 volts for a 6 volt battery or 13.6 volts for a 12 volt battery for floating charging.

### Disconnecting the Battery Charger and Battery:

1. Once the battery is fully charged, disconnect the Power Cord of the Battery Charger from its electrical outlet.
2. Disconnect the negative (BLACK with --) Battery Clamp from its unpainted, solid metal portion of the vehicle. Then disconnect the positive (RED with +) Cable Clamp (7) from the positive (+ or P) terminal of the battery.

(RED with +) Battery Clamp from the positive (+ or P) terminal of the battery.

3. Replace the battery caps on the battery.

aclean, soft cloth for best performance. Do not use solvents, acid, or alkali products.

4. **WARNING! If the Power Cord is damaged, it must be replaced only by a qualified service technician.**

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## MAINTENANCE AND SERVICING

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Procedures not specifically explained in this manual must be performed only by a qualified technician.

### **WARNING** TO PREVENT SERIOUS INJURY

**FROM ACCIDENTAL OPERATION OR PRODUCT FAILURE:**

**Unplug the Power Cord from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.**

**Do not use damaged equipment. If abnormal noise, heat, or vibration occurs have the problem corrected before further use.**

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### **Inspection, Maintenance, and Cleaning**

1. BEFORE EACH USE, inspect the general condition of the Battery Charger and its accessories. Check for cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation.
3. AFTER USE, clean the surface of the Battery Charger periodically with

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## PLEASE READ THE FOLLOWING CAREFULLY

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THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

## TROUBLESHOOTING

Problem	Display	Possible Causes	Possible Solutions
Battery Charger will not charge.	1. Screen is not turned on.	1. No AC power input.	1. Check the plug and power source.
The push buttons do not work.	1. Screen displays 00.0V. 2. Screen displays E01.	1. The battery is not connected. 2. The polarity connection is wrong.	1. Check the battery connections. 2. Make sure the polarity is correct.
There is a continuous "beep" sound.	1. Screen displays E02. 2. Screen displays E03.	1. The battery is disconnected during charging. 2. The battery is not 6V or 12V. 3. The battery is too low in voltage. (6V battery is less than 5.2V; 12V battery is less than 10.5V) 4. The battery is damaged.	1. Check the battery connection. Then resume charging. 2. Make sure battery is 6V or 12V. 3. If the battery is deeply discharged, wait for a while until it automatically turns back above 5.2V for a 6V battery or above 10.5V for a 12V battery. 4. If the battery is in low voltage status for a long time, then it is possibly damaged and needs to be replaced with a new battery.
Abnormal situation.	1. No display on screen, or abnormal display on screen.	1. AC power supply is not stable. Battery has hidden defect which prevents the Battery Charger from normal resetting.	1. Disconnect the power supply, then reconnect again. If the faulty situation occurs during charging, try another similar battery to determine if it is a battery problem or power supply problem.

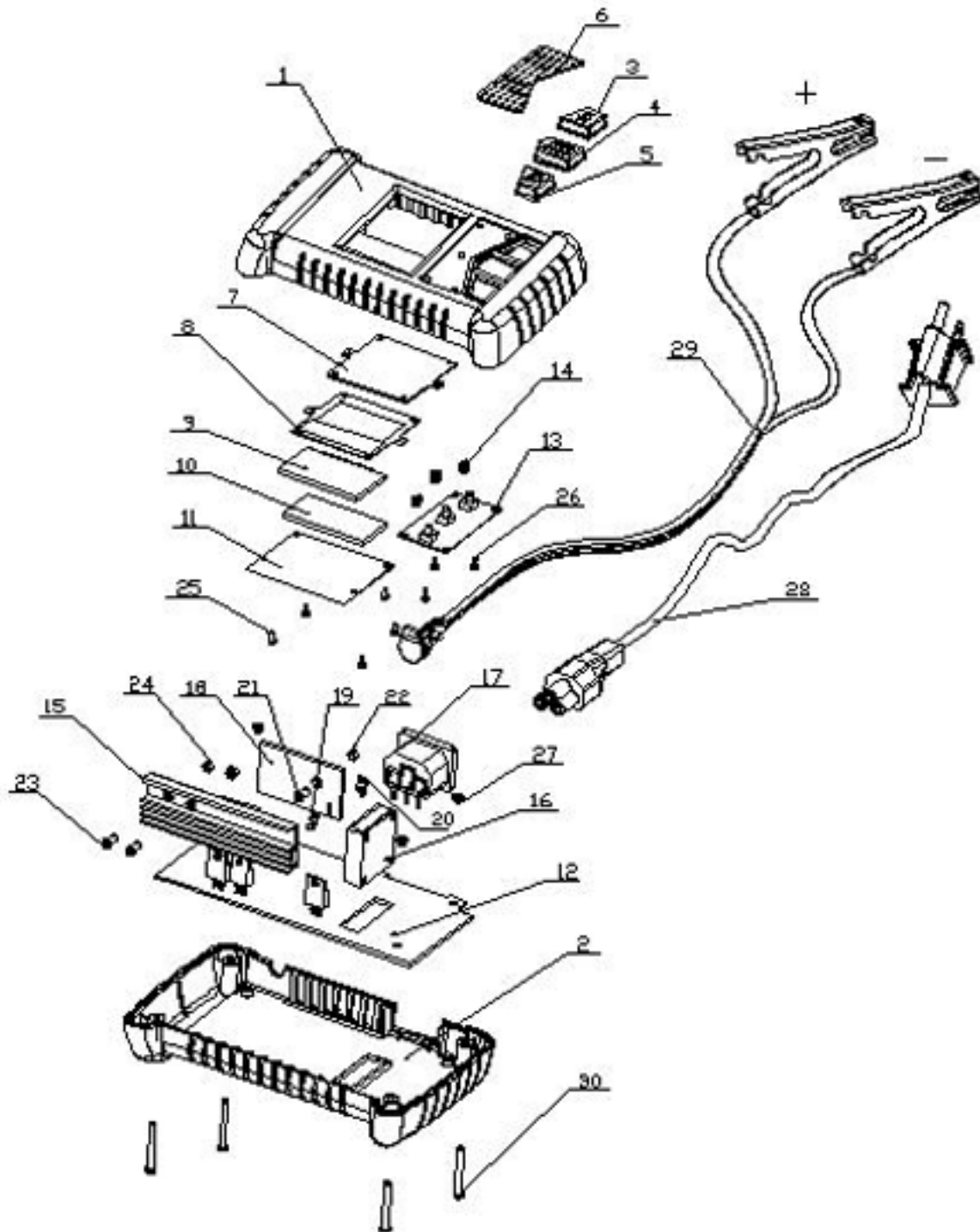


**Follow all safety precautions whenever diagnosing or servicing this product. Disconnect power supply before service.**

## PARTS LIST

Part #	Description	Qty.	Part #	Description	Qty.
1	Upper Housing	1	16	Sticker	1
2	Lower Housing	1	17	Socket	1
3	Battery Selection Button	1	18	Radiator Board (B)	1
4	Charging Speed Selection Button	1	19	Rivet	2
5	Power Switch	1	20	Welding Slice	1
6	Decorative Board	1	21	Screw (M3 x 6)	1
7	Screen Cover	1	22	Nut (M3)	1
8	Label	1	23	Screw (M3 x 6)	2
9	LCD	1	24	Nut (M3)	2
10	Back Board	1	25	Screw (ST2 x 4)	4
11	Display Feature Circuit Board	1	26	Screw (ST2 x 4)	4
12	Main Function Circuit Board	1	27	Screw (ST3 x 5)	3
13	Key Board Function Circuit Board	1	28	Power Cord	1
14	Key Board Spring	3	29	Battery Clamp	2
15	Radiator Board (A)	1	30	Screw (ST3 x 30)	4

# ASSEMBLY DIAGRAM



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## LIMITED 90 DAY WARRANTY

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Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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**Record Product's Serial Number Here:** \_\_\_\_\_

**Note:** If product has no serial number, record month and year of purchase instead.

**Note:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.